

Wright State University

**CORE Scholar**

---

Scholarship in Medicine - All Papers

Scholarship in Medicine

---

2021

## Signing Your Life Away? Emergency Department Patient Recall and Understanding of ED Consent for Treatment Based on Triage Level

Daniel Ross

Follow this and additional works at: [https://corescholar.libraries.wright.edu/scholarship\\_medicine\\_all](https://corescholar.libraries.wright.edu/scholarship_medicine_all)



Part of the [Emergency Medicine Commons](#)

---

**Signing Your Life Away?**  
**Emergency Department Patient Recall and Understanding of ED Consent for Treatment**  
**Based on Triage Level**

Daniel Ross, M.S.

Dr. Catherine Marco, M.D., FACEP,  
Boonshoft School of Medicine, Department of Emergency Medicine

Clinical Research Track

Scholarship in Medicine Final Report

☒ **By checking this box, I indicate that my mentor has read and reviewed my draft proposal prior to submission**

**Abstract:**

*Objective:* The determine the correlation between patient recall and understanding of Emergency Department (ED) consent for treatment and patient triage level. *Methods:* This was a prospective study based on demographical and triage data collected from patient charts, in combination with patient responses to the consent for treatment survey. *Results:* Of the 293 that participated in the study, the mean age was 52, with 122 (41.6%) males and 171 (58.4%) females. 179 (61.5%) identified as white/Caucasian and 100 (34.4%) identified as African-American. Most patients, 210 (72.4%), arrived by walk-in and the rest, 80 (27.6%), were by ambulance.

Participants with lower triage levels said they didn't remember anything from the consent for treatment document (51.4%) more often than patients with higher triage levels (25.9%) (  $p = 0/02$ ) Participants with higher triage levels recalled the document was specifically consenting for treatment (70.4%) more often than those with lower triage levels (38.9%) ( $p = 0.01$ ). There were

no significant relationships between the patient's triage level and reading the actual document, or recalling specific aspects of the document including HIPAA, billing, or patient rights. No patients in the study recalled the document containing information about attending physicians, photography, or personal property. Future directions of these findings could include a more standardized way of presenting and assessing understanding of this information to ED patients.

Key Words: consent, triage, emergency

### **Introduction/Literature Review:**

Informed consent is an important component of patient autonomy and shared decision-making. That makes this part of patient care crucial for the patient to understand what they are consenting to. The ED consent for treatment document at Miami Valley Hospital is a comprehensive 2 page document that details consent for treatments, attending physicians, release of medical information and privacy, photographs/video recording, financial agreement and assignment, cooperation with billing, patient assistance programs, Medicare, and personal property.

Upon arriving to the emergency department, all patients are triaged by a triage nurse to determine the severity of their emergency, using the Emergency Severity Index, a standardized triage scoring tool. This ranges from a scale of 1-5 with 1 being the most emergent and 5 being the least emergent.<sup>9</sup> The triage level is determined based on the chief complaint, the vital signs of the patient, past medical history, and other clinical variables. After triage the patient is taken to a treatment room where registration occurs shortly after. The registration process is to obtain the patient's demographic, insurance, and medical information and to obtain consent for their treatment in the emergency department.

Informed consent is important to patient autonomy and shared decision making. However, previous studies have shown that comprehension of informed consent by patients is poor. In a study by Dickert et al, patients following ST Elevation Myocardial Infarctions (STEMI) were asked about their consent process. They found that only 55% of their patients remembered being asked to be part of the trial. Despite the potential limitations due to their triage level, such as pain or lack of time, patients stated that they still wanted to be the primary decision maker and generally felt as though they were able to.<sup>2</sup> Informed consent for treatment is obtained from every ED patient, except in immediately life-threatening emergencies. Although this information is almost always given out, many patients cannot recall much information of informed consent even after information is provided.<sup>3,5</sup>

This information is given out in many different ways. Many hospitals give a document of papers that outline what the patient is consenting to. Many also utilize iPads and other portable electronic devices to display an electronic version of the consent document. Some just give a verbal explanation.<sup>8</sup> A recent study was done to compare the Flesch Reading ease score of different versions of the same consent document, one being standardized and one being the summary form. Although the summary form was found to have a significantly easier level of reading, a significant portion of the patients still had difficulty reporting what they had consented to.<sup>6</sup> Once there is a better understanding of how different patients perceive the information they are given, new implementations should be put into place to ensure that all patients are part of their healthcare decision-making. This may lead to more use of interactive distribution of information, electronics, or completely changing the current standard of consent signing. A few studies have shown that enhanced forms for consent as well as multimedia platforms and extended discussions have improved understanding of these forms.<sup>1,4,7</sup>

**Hypothesis / Specific Aims / Research Questions:**

Our null hypothesis is that there is no association of understanding of consent with triage acuity. Any association will lead to rejection of the null hypothesis. The aim is to see how information is given and perceived by patients of different triage levels during the consent process.

**Methods:***Context/Protocol*

This was a prospective study conducted at Miami Valley Hospital's Level 1 Trauma Center Emergency Department. Inclusion criteria included all adult ED patients, age 18 and over, who visit Miami Valley Hospital ED. Patients who were in distress, unable to communicate or who choose not to participate, were excluded from enrollment. Researchers used the emergency department EPIC dashboard to identify eligible subjects. Research assistants were comprised of three, 2<sup>nd</sup> year medical students who completed IRB training, approval by the Wright State University Institutional Review Board, and project specific training by the Principle Investigator.

*Data Collection*

Demographic information, triage level as well as information on whether the patient arrived by ambulance or walk-in was also recorded from patient charts. Verbal consent was obtained in the patient's treatment room. Patients were then asked questions about their consent process (see attached appendix). Patients were asked if they remember signing a document for consent for treatment, whether it was paper, electronic, verbal or no explanation given at all. They then were asked to recall and state the length of the form, the time it took, and specific

things that they remembered consenting to. These free text responses were recorded by research assistants.

### *Data Analysis*

Survey data were entered into a spreadsheet, without patient identifiers, and later analyzed. The data were transcribed into a ranking system based on patient responses and was then analyzed by a statistician. Testing of triage level association was performed using Chi-Square Analysis and Fisher's Exact Test\*.

### **Results:**

Among 309 eligible subjects, 293 participated. Of the 293 that participated in the study, the mean age was 52, with 122 (41.6%) males and 171 (58.4%) females. 179 (61.5%) identified as White/Caucasian and 100 (34.4%) identified as African American. Most patients, 210 (72.4%), arrived by walk-in and the rest, 80 (27.6%), were by ambulance.

**Table 1: Associations with Reading the Document Prior to Signing**

<b>Triage Level</b>	<b>N</b>	<b>Read all</b>	<b>Read parts</b>	<b>Did not read</b>	<b>Verbal Explanation</b>	<b>p-value</b>
1	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0.16
2	74 (26.8%)	4 (5.4%)	8 (10.8%)	29 (39.2%)	33 (44.6%)	
3	175 (63.9%)	16 (9.1%)	18 (10.3%)	66 (37.7%)	75 (42.9%)	
4	27 (9.3%)	0 (0%)	5 (18.5%)	5 (18.5%)	17 (63.0%)	
5	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	

In table 1, the association with triage level was tested with Chi-square Analysis.

The majority were triage level 3 and there were no patients with a level 1 or 5 (table 1). The majority of patients from all triage levels identified receiving a verbal explanation of the

consent for treatment document followed by admitting to not reading the document at all (table 1).

Respondents with lower triage levels had no recall of something in the document more often than patients with higher triage levels, p-value=0.02. Respondents with higher triage levels recalled consenting to treatment, p-value=0.01 (table 3). No patients recalled the document containing information about attending physicians, photography, or personal property (not shown).

**Table 2: Associations with Recalling Consenting to**

	<b>Triage Level</b>	<b>N</b>	<b>No Recall</b>	<b>Recalled</b>	<b>p-Value</b>
<b>Something</b>	2	72	35 (48.6%)	37 (51.4%)	<b>0.02</b>
	3	175	114 (65.1%)	61 (34.9%)	
	4	27	20 (74.1%)	7 (25.9%)	
<b>Treatment</b>	2	72	44 (61.1%)	28 (38.9%)	<b>0.01</b>
	3	175	78 (44.6%)	97 (55.4%)	
	4	27	8 (29.6%)	19 (70.4%)	
<b>Privacy/HIPAA</b>	2	72	70 (97.2%)	2 (2.8%)	0.81*
	3	175	166 (94.9%)	9 (5.1%)	
	4	27	26 (96.3%)	1 (3.7%)	
<b>Finances, Billing</b>	2	72	63 (87.5%)	9 (12.5%)	0.92
	3	175	151 (86.3%)	24 (13.7%)	
	4	27	24 (88.9%)	3 (11.1%)	
<b>Patient Rights</b>	2	72	70 (97.2%)	2 (2.8%)	0.88*
	3	175	168 (96.0%)	7 (4.0%)	
	4	27	27 (100%)	0 (0%)	

In table 2, association with triage level was tested with Chi-square or \*Fisher's Exact test.

**Discussion:**

In this study, higher triage levels had a statistically significant difference in their recollection of the consent for treatment document compared to those with a lower triage level. This may be due to more severe medical conditions being given a lower triage level upon presentation. It would be hard for a patient in severe pain<sup>2</sup> or constant nausea to be able to focus when being presented this information and then to remember this information when asked by the research assistant. How this information was presented varied but was predominantly verbal, but nonetheless recollection was still overall poor, similar to other studies.<sup>3,5</sup>

The most commonly remembered specific was that the document was for medical treatment of their condition. The name of the document being “consent for treatment” may be the primary reason for this, even if someone did not read it or only was given the verbal explanation. Since no patients recalled the information about attending physicians, permission for photography or holding personal property, it is likely that this information is not commonly included in the verbal explanation that the majority of patients receive.

This means that most patients, regardless of their triage level, are not being given all the information that is necessary for them to make their own decision on signing this consent document. Patients truly do not understand everything they are signing up for when they put their name on the dotted line, which raises questions and concerns for providers.

**Conclusion:**

Limitations to this study include the lack of level 1 and 5 triage patients. Level 1 are implied consent for treatment as they are life-threatening medical emergencies, and thus were excluded from the study. There was no explanation for the lack of level 5 triage patients. Other



limitations include dishonest answers, differences in understand and interpretation of questions on the survey, and administration of the survey by the different research assistants.

Future directions of this study could include a more standardized way of presenting this information to the patient. It also may be more up to date with technology or more interactive for the patient to ensure a better understanding. Once there is a better understanding of how different patients perceive the information they are given, new implementations should be put into place to ensure that all patients are part of their healthcare decision-making. This may lead to more use of interactive distribution of information, electronics, or completely changing the current standard of consent signing.

## References:

1. Cervo S, Rovina J, Talamini R, Perin T, Canzonieri V, De Paoli P, Steffan A. An effective multisource informed consent procedure for research and clinical practice: an observational study of patient understanding and awareness of their roles as research stakeholders in a cancer biobank. *BMC Med Ethics*. 2013 Jul 30;14:30.
2. Dickert NW1, Fehr AE, Llanos A, Scicluna VM, Samady H. Patients' views of consent for research enrollment during acute myocardial infarction. 2015. *Acute Card Care*. 17(1):1-4.
3. Kamath A, Up R, K AS. Willingness to participate in a clinical trial and understanding of informed consent information among medical students. *Indian J Med Ethics*. 2014 Jan-Mar;11(1):16-8.
4. Nishimura A, Carey J, Erwin PJ, Tilburt JC, Murad MH, McCormick JB. Improving understanding in the research informed consent process: a systematic review of 54 interventions tested in randomized control trials. *BMC Med Ethics*. 2013 Jul 23;14:28.
5. Sanchini V, Reni M, Calori G, Riva E, Reichlin M. Informed consent as an ethical requirement in clinical trials: an old, but still unresolved issue. An observational study to evaluate patient's informed consent comprehension. *J Med Ethics*. 2014 Apr;40(4):269-75.
6. Sivanadaraja N, El-Daly I, Mamarelis G, Sohali MZ, Bates P. Informed Consent and the Readability of Written Consent Form. *Ann R Coll Surg Engl*. 2017 Nov;99(8): 645-649
7. Sonne SC, Andrews JO, Gentilin SM, Oppenheimer S, Obeid J, Brady K, Wolf S, Davis R, Magruder K. Development and pilot testing of a video-assisted informed consent process. *Contemp Clin Trials*. 2013 Sep;36(1):25-31.
8. Tait AR, Voepel-Lewis T, Chetcuti SJ, Brennan-Martinez C, Levine R. Enhancing patient understanding of medical procedures: evaluation of an interactive multimedia program with in-line exercises. *Int J Med Inform*. 2014 May;83(5):376-84.
9. Tanabe P, Gimbel R, Yarnold PR, Kyriacou DN, Adams JG. Reliability and validity of scores on The Emergency Severity Index version 3. *Acad Emerg Med*. 2004 Jan;11(1):59-65. doi: 10.1197/j.aem.2003.06.013. PMID: 14709429.

## **APPENDIX**

### Consent for Emergency Treatment: Emergency Department Patient Recall and Understanding

#### Data Collection Form Database key

**STUDY ID** \_\_\_\_\_

Day of the week:

\_\_\_\_(1) Sun    \_\_\_\_ (2) Mon  
\_\_\_\_(3) Tues    \_\_\_\_ (4) Wed  
\_\_\_\_(5) Thurs    \_\_\_\_ (6) Fri  
\_\_\_\_(7) Sat

Patient age (years) \_\_\_\_\_ (if 90 or older, enter “90”)

Patient gender

\_\_\_\_(1) Male  
\_\_\_\_(2) Female

Patient ethnicity

\_\_\_\_(1) African American  
\_\_\_\_(2) Asian  
\_\_\_\_(3) White  
\_\_\_\_(4) Hispanic  
\_\_\_\_(5) Multiracial  
\_\_\_\_(6) Other \_\_\_\_\_

Mode of Arrival in ED

\_\_\_\_(1) Walk-In  
\_\_\_\_(2) Ambulance

ED Chief Complaint \_\_\_\_\_ (enter free text)

Triage level                      1                      2                      3                      4                      5

## Patient Survey

1. Did you sign a document to consent to treatment today in the Emergency Department (ER)?

\_\_\_(Y) Yes

\_\_\_(N) No

2. Was the document paper or electronic?

\_\_\_(P) Paper

\_\_\_(E) Electronic

3. If Yes, did you read the document prior to signing?

\_\_\_(1) Yes, I read the entire document

\_\_\_(2) Yes, I read part of the document

\_\_\_(3) No, I did not read the document

\_\_\_(4) No, I did not read the document but I received a verbal explanation

4. How long was the description of what you consented to? (enter free text)

A = don't know

B = 1 paragraph or less

C = 2 paragraphs to a page

D = 1-2 pages

E = > 2 pages

F = ≤ 1 minute

G = > 1 minute

5. If Yes, What did you consent to? Please list everything you remember. (enter free text)

A = don't know

B = treatment

C = attending physician

D = privacy/HIPAA

E = photography

F = finances, billing

G = personal property

H = patient rights

6. Do you have any comments about the process for obtaining consent for treatment in the Emergency Department ? (ER) (enter free text)

A = No, no problems

B = positive comments about ED visit

C = negative comments about ED visit

D = would like more information about consent

E – consent is a form of coercion/ don't have a choice